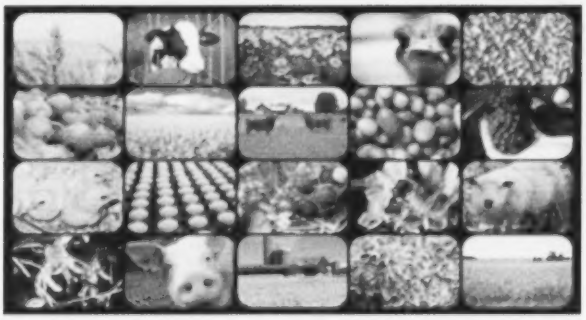
Catalogue no. 96-325-X — No. 001
ISSN 0-662-35659-4

Analytical Paper

Canadian Agriculture at a Glance

Demographic Changes in Canadian Agriculture



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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

Demographic Changes in Canadian Agriculture

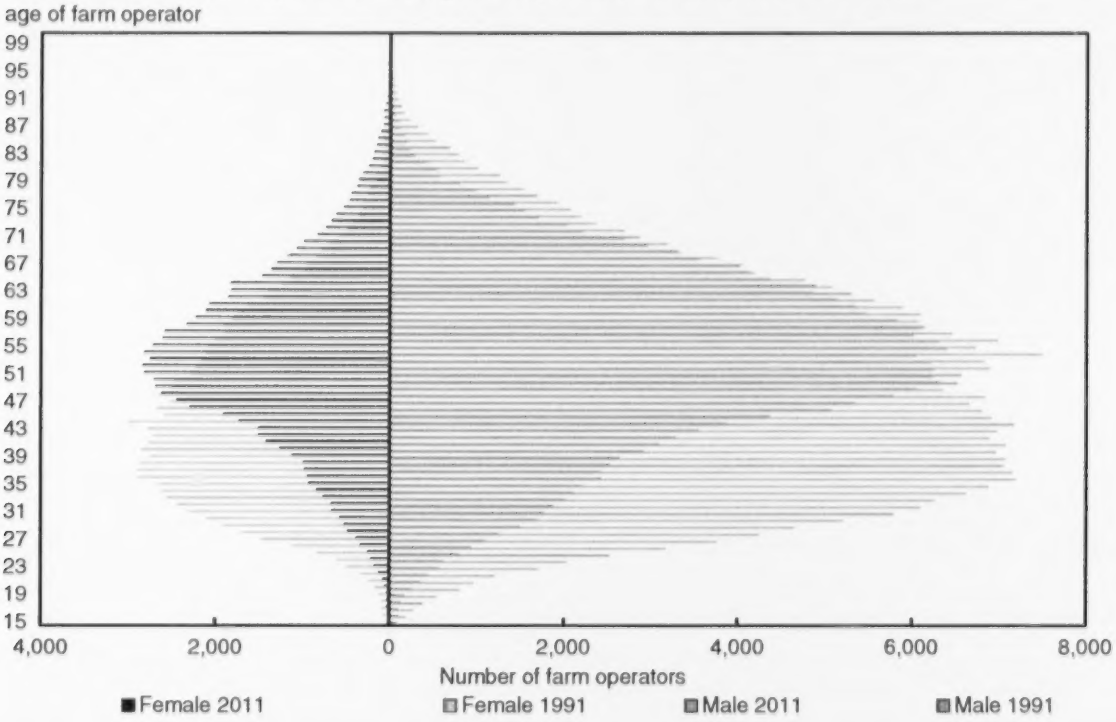
Martin S. Beaulieu, Agriculture Division

The structure of agriculture has changed significantly over the last two decades with fewer but larger farms. While there were 280,043 farms in 1991, according to the Census of Agriculture, by 2011, that number had gradually declined to 205,730. Since 1991, the average farm area increased from 598 to 778 acres, while the number of farm operators decreased from 390,875 to 293,925, a 24.8% drop. Over the same period, the average age of farm operators increased, rising from 47.5 to 54.0 years.

Between 1991 and 2011, the number of operators under 55 years of age decreased from 265,495 to 152,015 while the number of older operators increased from 125,380 to 141,920. Chart 1 illustrates how the age pyramid is shrinking with fewer farm operators under 50 years old. The trends of fewer operators and fewer farms show no signs of reversing and could indicate significant turnover in farm assets in the future. As the number of younger farmers continues to shrink, it is also reasonable to expect that significant amounts of farm assets will be bought by remaining farmers (increasing the number of larger farms) or may also be purchased by beginning farmers[1], private investors and immigrant farmers.

Photo: Ontario Agriculture Photo Library

Chart 1
Distribution of farm operators by age and gender, Canada, 1991 and 2011



Source: Statistics Canada, Census of Agriculture, 1991 and 2011.

1. Includes farmers of all ages.

This article examines the areas which were most impacted by an increasing number of retiring farm operators. Using data from the 2011, 2001 and 1991 Censuses of Agriculture, the distribution of farms by the age of the oldest operator is compared between provinces, farm types and farm sizes.

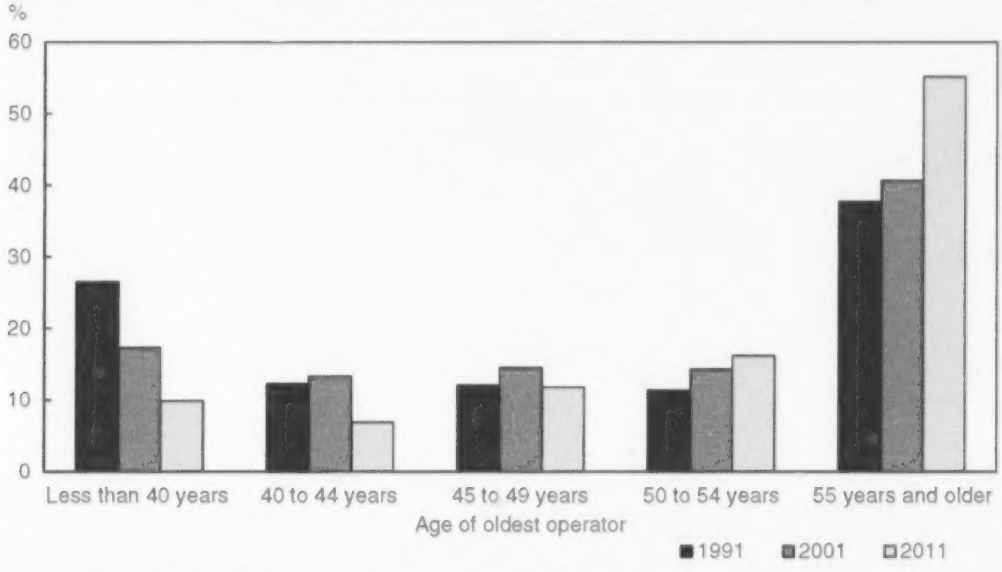
Fewer farms with young operators

Since 1991, the total number of Canadian farms decreased by 74,439 farms to reach 205,730 in 2011. However, when viewed from the perspective of the age of the operator, this decline was not observed in all demographics. There were an increasing number of farms where the oldest operator was 55 years or older, growing from 105,604 in 1991 to 113,475 in 2011. In the 2011 Census of Agriculture, these farms accounted for 55.2% of all farms compared to 37.7% in 1991.

Photo: Ontario Agriculture Photo Library

Between 1991 and 2011, the number of farms where the oldest operator was less than 40 years old declined almost 75.0% from 74,159 to 20,299 farms. These farms represented 9.9% of the total in 2011 compared to 26.5% in 1991. Chart 2 illustrates the important change in the distribution of farms based on the age of the oldest operator.

Chart 2
Distribution of farms by age of the oldest operator, Canada, 1991, 2001 and 2011



Source: Statistics Canada, Census of Agriculture, 1991, 2001 and 2011.

As reported in Statistics Canada's Labour Force Survey, the increasing number of self-employed people in the labour force is not unique to agriculture but rather the effect of an aging Canadian population.[2] As farming remains an important source of self-employment in rural areas, the countryside, and in the vicinity of larger urban centres, the implications of this aging workforce extend beyond the agriculture industry.

2. Bollman, Ray D. and Alessandro Alasia. 2012. "A profile of self-employment in rural and small town Canada: Is there an impending retirement of self-employed business operators?" Statistics Canada (publication 21-006-X, Vol. 9, No. 1). http://www.statcan.gc.ca/pub/21-006-x/2012001/finding-resultats-eng.htm.

The geography of demographic changes in Canadian agriculture

In 2011, farms where the oldest operator was 55 years or older were more prominent in all provinces (Table 1). These farms were relatively more prevalent in British Columbia and in the Atlantic provinces, where they accounted for more than 60% of all farms. Quebec was the only province where farms with the 55-plus operator comprised less than 50% of all farms (48.8%). Along with Manitoba (51.9%) and Saskatchewan (54.6%), these three provinces had relatively fewer farms where the oldest operator was 55 years or older compared with the national percentage.

Conversely, British Columbia (6.4%) and the Atlantic provinces (7.1%) had the fewest proportion of farms with young operators (i.e., operators under 40 years old).

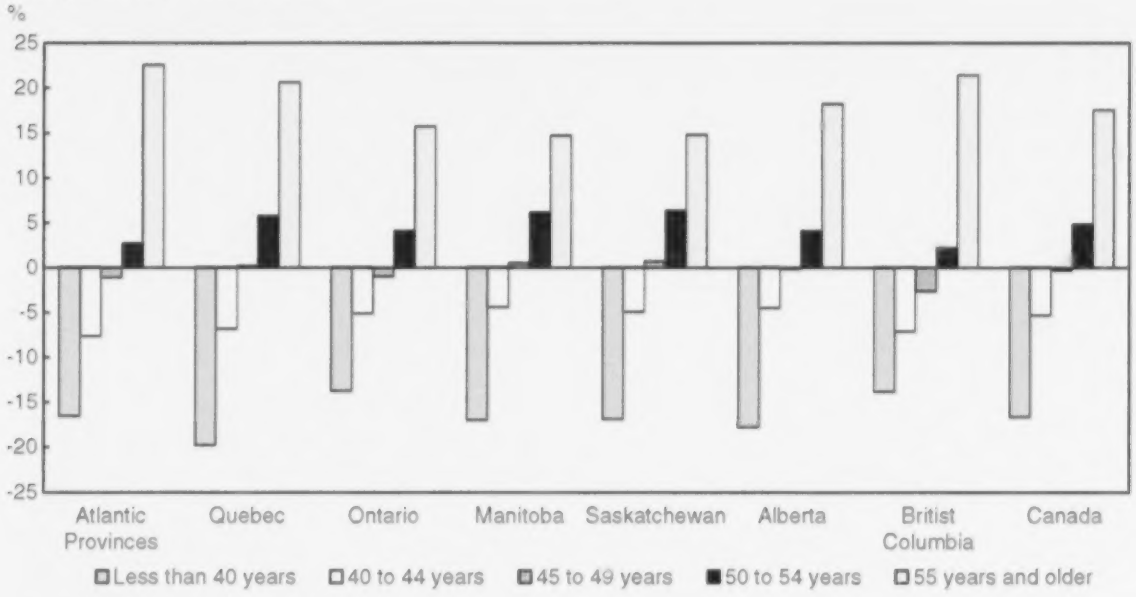
Table 1
Distribution of farms by age of the oldest operator, Canada and province, 2011

	Farms by age of the oldest operator				
	Less than 40 years	40 to 44 years	45 to 49 years	50 to 54 years	55 years and older
	percent				
Canada	9.9	6.9	11.8	16.2	55.2
Atlantic Provinces	7.1	6.5	11.5	15.0	60.0
Quebec	10.7	7.7	14.4	18.4	48.8
Ontario	9.5	6.7	11.5	15.9	56.4
Manitoba	11.5	7.7	12.3	16.6	51.9
Saskatchewan	11.8	6.6	11.0	16.1	54.6
Alberta	9.6	7.1	11.7	15.8	55.8
British Columbia	6.4	6.2	10.6	15.1	61.6

Source: Statistics Canada, Census of Agriculture 2011.

Chart 3 illustrates that between 1991 and 2011, the proportion of farms where the oldest operator was 55 years or older increased by more than 20 percentage points in British Columbia, the Atlantic provinces and Quebec. In the same period, the share of farms where the oldest operator was under 40 years old declined the most in Quebec (-19.7%), followed by Alberta (-17.7%) and Manitoba (-16.9%). The increase in the proportion of farms where the oldest operator was 55 years or older was significant in all provinces. There were also fewer farms where the oldest operator was under 40 years old in all provinces. The phenomenon of having a smaller cohort of young operators to take over from the cohort of older operators approaching retirement is widespread.

Chart 3
Percentage point change in the number of farms by age of the oldest operator, Canada and province, 1991 to 2011



Source: Statistics Canada, Census of Agriculture, 1991 and 2011.

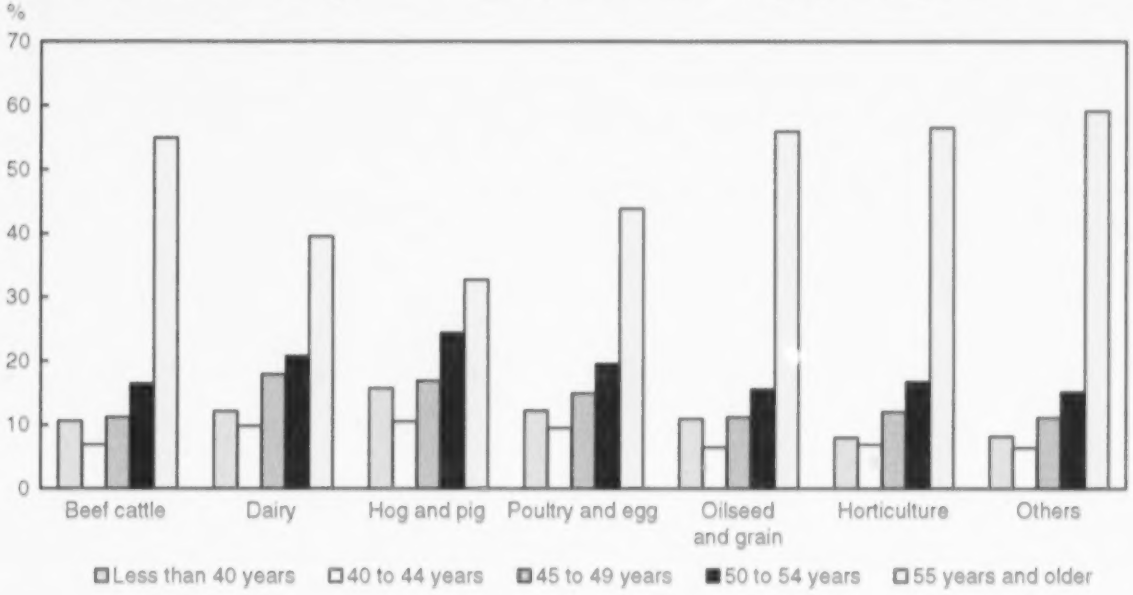
Farm type and demographic changes

Chart 4 illustrates that farms where the oldest operator was 55 years or older were dominant in all farm types ranging 32.7% for hog farms to 59.1% for the 'other' farm type.

Farms with the oldest operator under 40 years old represented between 8.0% and 12.2% of all farm types except for hog farms, where they accounted for 15.7% (Chart 4). The greater income stability provided by the supply management system for dairy, poultry and egg operations may be appealing enough for a young generation of operators to stay in agriculture and continue to operate the family farm. Due mainly to the large sum of money capitalized in farm assets (especially for the production quota in dairy and poultry farms), the younger generation have challenges to raise significant capital to pay the older generation. For hog farms, price stability is definitely not a factor in attracting the younger generation. Starting a hog farm is relatively easier for young operators, as they often enter the sector by setting up contracts with large integrator companies[3].

3. Vertical integration through production and marketing contracts are frequent in hog production. Under production contracts, growers raise animals owned by integrators. Form contracts contain detailed conditions for growers, who are paid based on how efficiently they use feed, provided by the integrator, to raise the animals. Under marketing contracts, growers agree in advance to sell their animals to integrators under an agreed price system (source Wikipedia).

Chart 4
Distribution of farms by age of the oldest operator and farm type, Canada, 2011



Source: Statistics Canada, Census of Agriculture, 2011.

Nevertheless, the hog and dairy sectors saw their share of farms operated by young operators (under 40 years old) drop the most between 1991 and 2011. During this period, the proportion of farms where the oldest operator was under 40 years old decreased by 23.4 percentage points for hog farms and 19.8 points for dairy farms. Interestingly, the combined older groups (50 years or older) in the hog sector gained 23.4 points. Older, more experienced hog-farm operators did not necessarily take advantage of the transition program[4].

Between 1991 and 2011, the share of farms where the oldest farm operator was 55 years or older increased the most for 'other' type of farms with a gain of 22.9 percentage points (Table 2).

4. On August 15, 2009 the Government of Canada announced a restructuring program for hog producers. It includes creation of a loan loss reserve fund for hog producers, a marketing fund and a transition program to help producers leave the industry. Eligible producers received payments if they agree to set aside all hog production in their enterprise for a minimum of three years.

Table 2
Percentage points change in the number of farms by age of the oldest operator and farm type, Canada, 1991 to 2011

	Farms by age of oldest operator				
	Less than 40 years	40 to 44 years	45 to 49 years	50 to 54 years	55 years and older
	percent				
Farm type					
Beef cattle	-12.4	-4.3	-0.8	4.4	13.1
Dairy	-19.8	-3.6	5.1	8.8	9.5
Hog and pig	-23.4	-4.2	4.2	13.0	10.4
Poultry and egg	-17.8	-4.1	1.1	7.2	13.7
Oilseed and grain	-17.0	-4.6	0.4	5.4	15.9
Horticulture	-15.2	-6.6	-1.3	3.9	19.1
Others	-15.7	-7.7	-2.3	2.8	22.9

Source: Statistics Canada, Census of Agriculture, 1991 and 2011.

Farm size and demographic changes

Data from the 2011 Census of Agriculture showed a few differences in the distribution of farms by the age of the oldest operator and farm size (as measured by total gross farm receipts). As a general rule, farms with older operators dominated among smaller farms. There were 76,564 farms with an operator 55 years or older and gross farm receipts of less than $100,000. They represented 37.2% of all farms in Canada and accounted for almost 60% of all smaller farms. More than half of small- or medium-sized farms (with annual gross receipts between $100,000 and $250,000) were farms where the oldest operator was 55 years or older. However, for larger farms ($250,000 and more), the proportion of farms where the oldest operator was 55 years or older was similar (around 45%, Table 3).

Table 3
Distribution of farms by age of the oldest operator and farm size, Canada, 2011

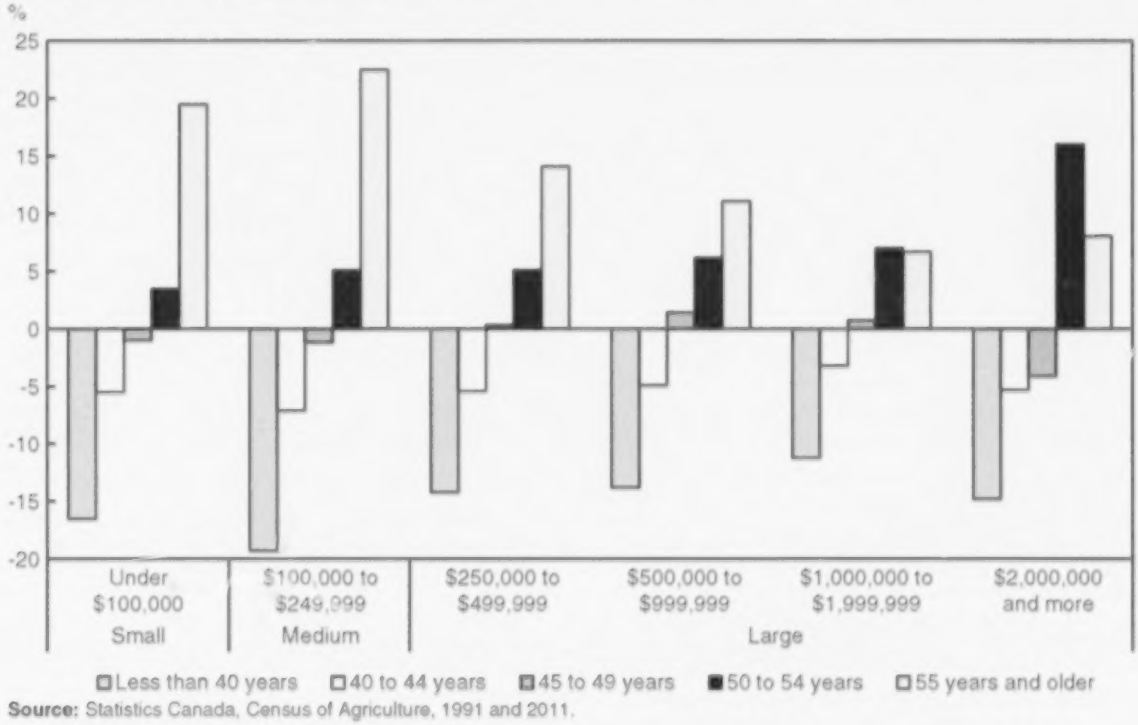
	Farms by age of oldest operator				
	Less than 40 years	40 to 44 years	45 to 49 years	50 to 54 years	55 years and older
	percent				
Gross receipts					
Under $100,000	9.0	6.1	10.5	14.5	59.9
$100,000-$249,999	11.9	7.3	12.6	17.5	50.8
$250,000-$499,999	12.1	8.9	14.8	18.9	45.3
$500,000-$999,999	10.5	9.2	16.0	19.5	44.9
$1,000,000-$1,999,999	9.7	8.7	15.1	21.7	44.8
$2,000,000 and more	6.7	7.5	10.9	29.2	45.7

Source: Statistics Canada, Census of Agriculture 2011.

Chart 5 shows that the proportion of small or medium-sized farms (with annual gross receipts of less than $250,000) where the oldest operator was 55 years or older increased the most during the 1991-2011 period. The proportion of smaller farms increased by 19.5 percentage points over this time, while it grew by 22.5% for medium-sized farms. Meanwhile, the proportion of farms where the oldest operator was under 40 years old decreased regardless of farm size. Another segment worth

discussing are the very-large farms (with gross farm receipts of $2,000,000 and more) operated by farmers in their early fifties. This group gained 16 percentage points between 1991 and 2001.

Chart 5
Percentage points change in the number of farms by age of the oldest operator and farm size (gross receipts), Canada, 1991 to 2011



Source: Statistics Canada, Census of Agriculture, 1991 and 2011.

Transition of Canadian farms from 1991 to 2011

It is particularly interesting to follow the transition of farms over time. This section focuses on the transition of farms over the period 1991 to 2011, grouped according to the age of the oldest operator. It looks at who was still in operation in 2011, who was out of the business and who was newly enumerated[5].

As mentioned previously, in 1991 there were 105,604 farms where the oldest operator was 55 years or older. More than a quarter of these farms (28,911 or 27.4%) were still in operation in 2011. A total of 76,693 farms where the oldest operator was 55 years or older in 1991 were not enumerated in 2011. Their ownership likely changed to someone else during this 20-year period.

Of the 74,159 farms where the oldest operator was under 40 years old in 1991, more than half (39,349 or 53.1%) were still in operation in 2011. Among these farms, one out of four farms (17,166 or 23.1%) had the oldest operator at 55 years or older in 2011. In turn, 34,810 farms (46.9%) with the oldest operator under 40 years old in 1991 were not enumerated in 2011.

5. A farm that was not enumerated in 2011 may have changed ownership, its farm name or legal structure, which may have hampered the Census of Agriculture's ability to track the same farm over time.

Table 4
Transition of farms between 1991 and 2011, Canada

	Active in 1991	1991 farms not enumerated in 2011	All 1991 farms enumerated in 2011	1991 farms by age of oldest operator in 2011				
				Less than 40 years	40 to 44 years	45 to 49 years	50 to 54 years	55 years and older
			number of farms					
Oldest operator status in 1991								
Less than 40 years	74,159	34,810	39,349	781	1,513	6,666	13,223	17,166
40 to 44 years	34,342	17,430	16,912	721	178	234	449	15,330
45 to 49 years	33,881	18,556	15,325	794	566	355	400	13,210
50 to 54 years	32,057	19,213	12,844	624	772	908	543	9,997
55 years and older	105,604	76,693	28,911	1,044	1,582	3,162	4,134	18,989
All farms	280,043	166,702	113,341	3,964	4,611	11,325	18,749	74,692

Source: Statistics Canada, Census of Agriculture, 1991 and 2011.

Table 5
2011 farms classified by age of oldest operator and enumeration status in 1991

	Status in 2011					
	Farms by age of oldest operator					
	Less than 40 years	40 to 44 years	45 to 49 years	50 to 54 years	55 years and older	All farms enumerated in 2011
	number of farms					
Enumeration status in 1991						
2011 farms enumerated in 1991	3,964	4,611	11,325	18,749	74,692	113,341
2011 farms not enumerated in 1991	16,335	9,647	13,000	14,624	38,783	92,389
All farms 2011	20,299	14,258	24,325	33,373	113,475	205,730

Source: Statistics Canada, Census of Agriculture, 1991 and 2011.

Among the 92,389 farms in 2011 that were not enumerated in 1991 (or 'new farms'), 38,783 (42%) were farms where the oldest operator was 55 years or older. They accounted for 18.9% of all farms enumerated in 2011. In contrast, 16,335 (7.9%) of these new farms had the oldest operator under 40 years old. These new farms in 2011 were not necessarily all farms acquired in part or as a whole by new investors or beginning farmers. They could have been existing farms for which a change occurred during the period, such as a change of ownership among family members, a change of legal arrangement or the reorganization of existing farms into new legal entities, etc.

Summary

The demographic composition of the Canadian agriculture industry is undergoing significant changes as many farm operators are approaching an age when they may retire. The 2011 Census of Agriculture found that farms where the oldest operator was 55 years or older represented more than half of all farms in 2011, compared to 37.7% in 1991. In addition, less than one out of 10 farms had the oldest operator under 40 years old in 2011, whereas two decades earlier it was about 1 in 4. These two trends were found in farms of different types and sizes in all provinces.

The trends of fewer operators, fewer young operators and fewer farms showed no signs of reversing and may indicate more consolidation and significant turnover in farm assets in the future. The topic of farmer demographics is an area that may benefit from further data and further study.